CORRES. CONTROL
INCOMING LTR NO.

0177 RF 94

DUE
DATE

ACTION

DIST.	LTR	ENC
BENEDETTI, R.L.		
BENJAMIN, A.		
BERMAN, H.S.		
CARNIVAL, G.J.		
COPP, R.D.		
CORDOVA, R.C.		
DAVIS, J.G.		
FERRERA, D.W.		
FRANZ, W.A.		
HANNI, B.J.		
HEALY, T.J.		
HEDAHL, T.G.		
HILBIG, J.G.		
HUTCHINS, N.M.		
KIRBY, W.A.		
KUESTER, A.W.		
MAHAFFEY, J.W.		
MANN, H.P.		
MARX, G.E.		
McKENNA, F.G.		
MORGAN, R.V.		
PIZZUTO, V.M.		
POTTER, G.L.		
SANDLIN, N.B.		
SATTERWHITE, D.G.		
SCHUBERT, A.L.		
SETLOCK, G.H.		
SULLIVAN, M.T.		
SWANSON, E.R.		
WILKINSON, R.B.		
WILSON, J.M.		
Houk R	X	
Burmeister m	X	
Cowdry C	X	
Broussard m	X	
Stiger S	X	

CORRES CONTROL	x	x
PATS/T130G		
ADMN RECORD/080	2L	

Reviewed for Addressee
Corres. Control RFP

1-12-94 DATE BY

Ref Ltr. #

DOE ORDER # 5400.1

RF-46522 (Rev. 9/93)

Department of Energy

ROCKY FLATS OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

00002116?

94-DOE-00176

JAN 11 1994

Mr. Martin Hestmark
U. S. Environmental Protection Agency, Region VIII
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Mr. Gary Baughman
Hazardous Waste Facilities Unit Leader
Colorado Department of Health
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

EG&G ROCKY FLATS PLANT CORRESPONDENCE CONTROL JAN 12 9 11 AM '94

Gentlemen:

This letter is being written to inform you of recent operations and actions which have been taken regarding the Interim Measure/Interim Remedial Action (IM/IRA) Water Treatment Facility at Operable Unit (OU) No. 1.

On December 1, 1993, routine chemical monitoring of the system effluent showed that the water in tank TK205 had a pH of 3.5. The immediate action taken was to split and equalize the effluent water in TK-205 with effluent tank TK-206 which was empty. Attempts were then made to neutralize the effluent in these tanks by mixing this water with water from the french drain and retreating the mixture through the ion exchange system. This action proved unsuccessful because the ion exchange system can not generate enough water of sufficiently high pH to neutralize the system.

A further action to neutralize the effluent in TK-206 was taken by injecting approximately 1 gallon of a 50% solution of Sodium Hydroxide (NaOH) into the system. The appropriate amount of caustic which was introduced was determined by titrating samples which were taken from the TK-206 tank. Using this procedure, the pH was successfully adjusted from 3.8 to 8.6 in tank TK-206. Other analyses of the effluent chemistry showed that all parameters having ARAR's were well below discharge standards in this tank. These analyses did, however, reveal a very low level of total xylene (9 ppb) in the effluent.

It is suspected that the low concentration of total xylenes was a result of the unusually long residence time of the water in the effluent tank. Low concentrations of total xylene have been previously detected in the system effluent before, and it was determined through discussions with the tank coating manufactuer and from reviewing literature, that volatile organic compounds (VOCs) would leach from the coating in the tank throughout its lifespan. This was discussed in detail in a letter to the Environmental Protection Agency (EPA) and the Colorado Department of Health (CDH) on October 19, 1992, (Ref: 92-DOE-11824).

A-OU01-000839

JAN 1 1 1994

M. Hestmark & G. Baughman 2
94-DOE-00176

It is Department of Energy's (DOE) intention to discharge the effluent in tank TK-206 to the South Interceptor Ditch without reprocessing it through the UV/Peroxide system to further breakdown the VOC for the following reasons:

1. The coating in the tank was approved by the EPA in 1984 for use in potable water applications.

2. The Series 20 POTA-POX Epoxy which is used on the influent tanks and on the ion exchange system surge tank is also approved for potable water storage facilities.

3. The Safe Drinking Water Maximum Contaminant Level Goals and Big Dry Segment 4 (Rocky Flats) Water Supply Stream Standards for total xylene are 10,000 ppb and 680 ppb respectively. The measured concentration of the effluent in TK-206 is 9 ppb.

DOE's intention to discharge this water was verbally discussed with EPA and CDH personnel by phone on 1/4/94 and 1/6/94 respectively.

Effluent tank TK-205 is currently receiving treated water from the system but it is suspected that it will require a similar neutralization method as was used on TK-206. It is also probable that this water will also contain low levels of xylene. It is DOE's intention to discharge this effluent if similar chemical conditions are found (i.e. chemical analyses show low, but acceptable, levels of total xylene in the effluent water and other constituents are below ARAR's).

EG&G personnel are currently monitoring the water treatment system to determine the cause of the low pH which occurred in the effluent. We will continue to keep the appropriate EPA and CDH personnel informed of this situation, as well as the results of chemical analysis the TK-205 effluent .

If you have any questions regarding the above material please contact Tim Reeves at 966-6124 or Jen Pepe of my staff at 966-2184 respectively.

Sincerely,

Martin H. McBride
Acting Assistant Manager for
Environmental Restoration

JAN 1 1 1994

cc:
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S. Grace, ER, RFO
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G. Kleeman, EPA